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TID/TAB - 167/64
17 December 1964

MEMORANDUM FOR THE RECORD

SUBJECT: Trip []

1. [] on 2 December 1964 to view and discuss the [] Four Horizon Camera. The following is a report on the trip:

a. The camera is completed and the necessary magazines are retrofit to the camera. The optical pyramid for recording the four horizons was not at [] but scheduled for delivery within two weeks. The retrofit mount for the optical pyramid is finished and has been mounted on the camera base.

b. The data block has been designed and is under fabrication to be delivered within two weeks for fitting into the camera.

c. Each exposure will be on a format of about 35 mm wide and 70 mm long. The excess length is for the addition of the data block.

d. A test run with the camera in an Apache aircraft belonging to [] will be flown on the Arizona test range in mid January; the flying height will be 27,000 feet. There will be a K 17 camera flown with this test run for proper resection problems to determine how well the [] camera operates. The statiscopes will be flown with this array and will be tested over a range of several thousand feet by varying the altitude of the aircraft.

e. The film from this test run will be delivered to NPIC through [] and a feedback through [] of system performance will be required by [] personnel in order to check and update their equipment.

f. There are no fiducials in the camera, however; this will be accomplished before the test flight.

Declass Review by NGA.

GROUP 1
Excluded from automatic
downgrading and
declassification

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25X1 8. Calibration of the camera will be accomplished with a collimator at [] before the test flight.

h. Two blueprints were available and are now at NPIC. One print is of the data block and the other one of the optical pyramid showing the ^{field of} field angles, etc. Two other blueprints were requested and will be sent through channels to NPIC within the next few days.

1. [] were the primary personnel contacted and will be the project engineers on the project. 25X1

[]
TID/TAB 25X1

Attachments:

Camera Layout Diagram
Data Block Diagram
Film Format

Distribution:

Orig - Chief, TID/TAB

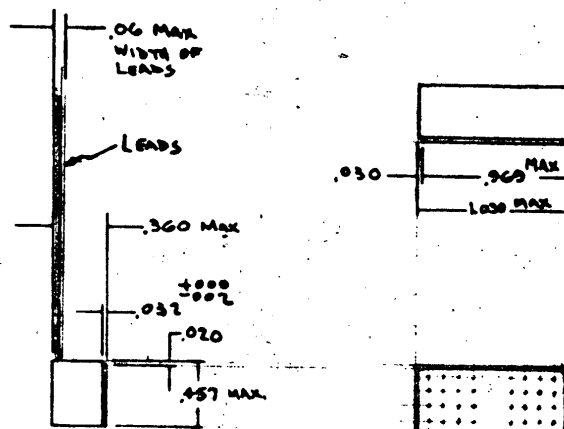
1 - TID/TAB

1 - P&DS: [] 25X1

1 - OSA []

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CAMERA



LAMP CONFIGURATION

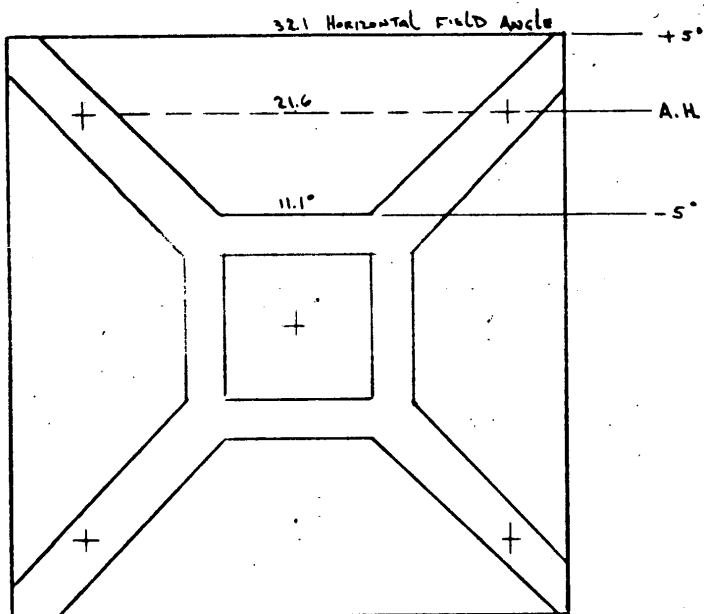
C64-5

M.J. 11/20/64

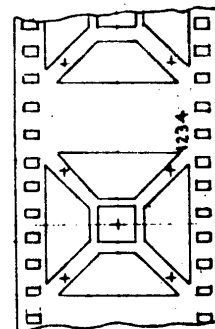
At 6 mm to TID/TAB - 167/64

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CAMERA



4x Scale



Full Scale

FILM FORMAT

CG4-9

Contract Status

Attitude Determination System Contract

1. Proposal Received : 18 December 1963

2. ^{R&D PAR} ~~IDC Minutes~~ Approved : 5 November 1964

3. Contract Signed : 11 August 1964 (DDI ^{also} ~~approval~~)

4. Delivery Date : 31 December 1964

5. Amount of Contract : (estimated)

6.

Notes on Statorscope:

1. Record differences in altitude, at 10 000 feet, to ± 6 feet
2. Record differences in altitude, at 50 000 feet, to ± 10 feet
3. Usable range at 10,000 & 50,000 feet is ± 600 feet.
4. At the start of each run, the gain of the DC Amplifier must be set to correspond to the outside air pressure and temperature.
5. Size 5" high x 16" wide x 12" deep, wgt > 20 lbs.

Flight recorder Model A 12? (Signal Conditioner & Data Monitor) - Mag Japan - HG 8023 A1

1) Quantities - Lat., Long., Ground Speed, Camera Pitch & Roll, Camera Heading, Drift δ , Ground Angular Rate, Relative Time

2) Recording Format -

- a) Time - Precision 400 cps continuous recording
- b) All others - Serial Binary whole run by sample once per camera exposure.

3) Wgt - 30 lbs

4) Contact (With 90% easy electronic modification with existing test equip.

a) Decimal Printout